

Mathematical Biosciences

Mathematical Biosciences is abstracted or indexed in Applied Mechanics Review, Biological Abstracts, CABS/Current Awareness in Biological Sciences, Chemical Abstracts, Current Contents, Engineering Index, Excerpta Medica, INSPEC, International Abstracts of Biological Sciences, Mathematical Reviews, and Medicus/MEDLINE.

Volume 180

November/December, 2002

John A. Jacquez Memorial Volume

J. Bieseke, D. Foster, G.M. Jacquez, R.D. Phair, C. Simon and M. Jacquez: John A. Jacquez	vii
K. Dietz and J.A.P. Heesterbeek, Daniel Bernoulli's epidemiological model revisited	1
J.A. Jacquez and G.M. Jacquez, Fisher's randomization test and Darwin's data – A footnote to the history of statistics	23
P. van den Driessche and J. Watmough, Reproduction numbers and sub-threshold endemic equilibria for compartmental models of disease transmission	29
J.S. Koopman, S.E. Chick, C.P. Simon, C.S. Riolo and G. Jacquez, Stochastic effects on endemic infection levels of disseminating versus local contacts	49
F. Ball and P. Neal, A general model for stochastic SIR epidemics with two levels of mixing	73
P.D. O'Neill, A tutorial introduction to Bayesian inference for stochastic epidemic models using Markov chain Monte Carlo methods	103
C.J. Mode and C.K. Sleeman, An algorithmic synthesis of the deterministic and stochastic paradigms via computer intensive methods	115
J.A. Jacquez, Density functions of residence times for deterministic and stochastic compartmental systems	127
H. Hethcote, Ma Zhen and Liao Shengbing, Effects of quarantine in six endemic models for infectious diseases	141
B.M. Murphy, B.H. Singer, S. Anderson and D. Kirschner, Comparing epidemic tuberculosis in demographically distinct heterogeneous populations	161
B. Song, C. Castillo-Chavez and J.P. Aparicio, Tuberculosis models with fast and slow dynamics: the role of close and casual contacts	187
H.R. Thieme and J. Yang, An endemic model with variable re-infection rate and applications to influenza	207
M.A. Savageau, Alternative designs for a genetic switch: Analysis of switching times using the piecewise power-law representation	237

Mathematical Biosciences

S.J. Merrill and B.M. Murphy, Detecting autocatalytic dynamics in data modeled by a compartmental model	255
E.O. Voit, Models-of-data and models-of-processes in the post-genomic era	263
L.J. White, N.D. Evans, T.J.G.M. Lam, Y.H. Schukken, G.F. Medley, K.R. Godfrey and M.J. Chappell, The structural identifiability and parameter estimation of a multispecies model for the transmission of mastitis in dairy cows with postmilking teat disinfection	275
L.M. Sander, C.P. Warren, I.M. Sokolov, C. Simon and J. Koopman, Percolation on heterogeneous networks as a model for epidemics	293
T.L. Jackson and H.M. Byrne, A mechanical model of tumor encapsulation and transcapsular spread	307
J.A. Jacquez and C.P. Simon, Qualitative theory of compartmental systems with lags	329
Author index (vol. 180)	363
Subject index (vol. 180)	365
Author index to volumes 175-180	367
Subject index to volumes 175-180	371

